1. INTRODUCTION:

Crystal Guard EPAX system has been specifically developed to meet the requirement of group housing societies with latest state-of-the-art features like Panic alarm on single pair intercom cable, Cable cut alarm, 12 party conferencing, Caller ID on extension, Vendor arrival announcement and many more which are totally un-matchable by any other system. The Crystal Guard system can be configured from 16 lines to maximum of 256 lines as desired. The Guard system is available in four models viz. 32 lines, 64 lines, 128 lines and 256 lines.

This guide will help you find and learn the user codes, so that you can use your CRYSTAL EPAX system exactly the way you want it. Take a little time to read through it and try out some of the codes on your extension.

1.1 Extension Telephone

Standard electronic push button instruments should be used on the Crystal EPAX system.

2. INSTALLATION & COMMISSIONING

2.1 Requirements

Installation should be done by authorized & trained personnel only.

2.2 Site Requirements

CRYSTAL is designed to work in a normal environment. The unit should be placed away from

1 Processes producing electricity, fumes, dust, gasses or radiation (e.g. silicon or halon contamination from photo copying or fire protection equipment)
2 Electrical meters or switchgears
3 Water pipe, gas meters, pipes or appliances
4 Dampness
5 Vibration

2.3 General

Ensure a good power point for the exchange with a 5 pin socket & switch. If possible, the customer should be asked to provide a " clean" power supply direct from the power distribution board. CRYSTAL is set to work at 220VAC, 50Hz mains supply.

WARNING:
ANTI-STATIC PRECAUTIONS MUST BE TAKEN WHEN WORKING WITH THE CARDS OR COMPONENTS OF CRYSTAL EPAX.

CAUTION:
Never insert or pull cards or any cable from the equipment with the "power on" under any circumstances.

2.4 Commissioning Checks

Power-up CRYSTAL system and carry out the following checks:
On each extension check:

1 System dial tone
2 Dialing
3 Ringing

The exchange once installed and put into operation needs little routine maintenance. Any extension fault can be isolated at the MDF, and exchange faults can be isolated at the card level.
Faulty cards can be replaced with service cards while they are repaired at authorised maintenance center to minimize system down time.
Note:
Damage caused on Crystal systems due to high voltages is not covered under warranty.

3. NUMBERING SCHEME:

The default extension numbers are in 4 - digits and start from 2001 up to 2256.

4. HOOK FLASH

You shall have to use the “Hook-Flash”, prior to dialing any facility code. Hook flash (HF) is a gentle/ slow tap of the cradle switch. After HF, you shall get a slow acceptance tone.

4.1 The Thumb - Rule for using Hook Flash

Whenever dialing any extn. number or code from - dial tone/call forward dial tone/engaged tone, dial straight away .For dialing extn. number or facility code from ring back tone / conversation mode, first HF and then dial the required number.

Note:

1. After completion of any call replace your handset for minimum 1 sec for disconnection before going off hook for the second call.
2. If your instrument is provided with a flash key, enquire the timing of key from your system manager / dealer. If it is below 300 milliseconds, do not use this key (it shall be ignored by the system). You may use the cradle switch for HF. If the timing is between 300-600 msec, you may use this flash key for HF.

If while transferring a call, you press any wrong code / extn. no. do not panic. You can HF anytime. You shall get beep tone again .Now you can transfer the call to any extension.

5. MAKING CALLS:

When you pick-up your phone, you will hear internal dial tone, then

☞ **Dial the desired extension number in tone mode.**

6. CALL PICK - UP:

6.1 Specific Call pick-up

If any other extension is ringing , to answer it from your non - ringing phone,

- ☞ **Dial * 76 + XXXX**
  Where XXXX = Extension Number of the ringing phone.

Note:
Alarm call ringing on a particular extn. cannot be picked by any other extn.

6.2 Common Call Pick-up

You can make nine call pick-up groups. An extn. can pick-up any ringing extn. in his same group by dialing

- ☞ *** 77**

7. AUTO CALL BACK:

If the extension you are trying is busy so that you cannot get through it, you do not have to keep trying it again and again. By using this feature you can program the busy extension to ring back automatically as soon as it becomes free. If you dial any extension number and get busy tone,

To request a ring back,

- ☞ **Dial 75**

Hang - up.

When the extension becomes free , both your phone and the one on which you had programmed auto call back feature will start ringing. When that extension answers, you will be connected.

8. CLI FEATURE:

If you install a CLI telephone on any extension, you can avail this facility. The calling extension number shall be displayed on your extension.

In default, this feature is enabled on all extensions

9. DO NOT DISTURB:

If you are busy with some important work and do not want to be disturbed, you can enable this feature on your extension. Now, if any other extension calls your extension, he will get music only.

To Enable this feature,

- ☞ **Dial * 72 + XXXX**
  Where XXXX = Self Extension Number

To **Cancel** this feature,

- ☞ **Dial * 730.**

Note:
A broken dial tone is always heard on the extension with this feature enabled.

10. BARGE - IN:

If any important or priority message is to be passed on to an Extn which is busy, you can break into this extension.
To pass on any message,

- ☞ **Dial Desired Extn. Number.**

After getting busy tone,

☞ **Dial 83.**

You will be immediately connected to the busy extension and all the three extensions will get short beeps as long as the barge - in process continues.

Note:
Barge - in shall not work if the busy Extn. is in dialing / ringing mode.

11. MONITOR:

With this facility you can monitor the conversation of two extensions without any indication (short beeps) to the busy extensions.
To Monitor,

☞ **Dial Extension Number.**

After getting busy tone,

☞ **Dial 80.**

You can now monitor the conversation between the busy extensions.

12. CONFERENCING:

When an extension is busy with some other extension, to bring third extension into conference,

☞ **H/F & Dial the third extension number**.

When the third extension answers,

☞ **H/F & Dial *0**

If more than one extensions are to be involved in the conference, go on adding those extensions by H/F and dialing the desired extension numbers
When all the desired extensions have been added, announce conference and,

☞ **H/F & Dial *0.**

A conference call involving all the extensions is established.
While adding more extensions for conferencing, the already added extensions continue to get music till the conferencing feature has been activated

13. CALL FORWARD:

If you are going to be near another extension phone rather than your own, or if you wish to divert all calls made to you to some other extension, then you can set your phone so that anyone dialing you will be put through to the other extension.
A call forward dial tone (broken dial tone) is always heard on the phone, which has been diverted. This does not mean that you cannot use it for making calls.

To divert your calls to other extension from your own extension,

☞ **Dial * 72 + XXXX**
Where XXXX = Extension to which the calls are to be diverted.

Now, anyone dialing your number shall be connected to this programmed extension.

To cancel Call Forward,

☞ **Dial * 730**

You will hear normal dial tone

Note:
Whenever you lift handset you will hear call forward dial tone (broken dial tone). Anyone picking up your phone will hear this tone until diversion is cancelled.

Note:To use this feature, your extension should be enabled for the same from feature table programming.

14. HOT LINE:

This feature comes in useful when a particular extension is to be used continuously and repeatedly over a period of time.
To set any extension for hotline,

☞ **Dial * 961 + XXXX + Y**
Where XXXX = Extension Number
Y = Delay Time (2 ~ 9 sec.) after which you want the ring to start.

To **Cancel** hotline,

☞ **Dial * 960**

15. ALARMS:

15.1.One Time Alarm:

To program your extension to ring at a specified time,

☞ **Dial * 982 + HH MM**
Where HH MM = Time in 24 hour format.

15.2. Repeat Alarm:

Alternately, you can set your extension to ring daily at the specified time.
To program a repeat alarm,

☞ **Dial * 983 + HH MM**
Where HH MM = Time in 24 hour format.

Your extension shall now ring daily at this specified time till it is cancelled. If a voice module is installed in the system you can programme for a voice prompt, example -"Good Morning" etc., which shall be heard on going off hook on an alarm call

Note :
To cancel any of the above alarms,
☞ **Dial * 980**

16. FLEXIBLE NUMBERING:

You can allocate any 1,2,3 or 4-digit number to any extension.

For Example: You can program
Extn 2001 as 21
Extn 2010 as 301
Extn 2225 as 4001 etc..
Refer to the programming section of the manual for the programming of the above.

Note:

1. If you shall be using a mix of 2/3/4 digit numbers, then numbers having starting common digits cannot be assigned to any other extension.

2. Same number cannot be assigned to two ports.
3. After setting flexible number, any extension programming must be done using revised extn. numbers.

17. FEATURE GROUPS:

Following features can be selectively allowed or disallowed to any extension in 10 different combinations.

Feature Name	Feature Number
Internal dialing	00
Auto call back	01
Call pick up	02
Call forward / Do not disturb	03
Hotline	04
Paging	05
Relay port access	06
Conferencing	07
Alarms	08
Barge - in	09
Monitor	10

Following 10 combinations of features are possible:

Feature No.	00	01	02	03	04	05	06	07	08	09	10
Group 0	N	N	N	N	N	N	N	N	N	N	N
Group 1	Y	N	N	N	N	N	N	N	N	N	N
Group 2	Y	Y	N	N	N	N	N	N	N	N	N
Group 3	Y	Y	Y	N	Y	N	N	N	Y	N	N
Group 4	Y	Y	Y	Y	Y	N	Y	N	Y	N	N
Group 5	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N
Group 6	Y	Y	Y	Y	Y	N	N	N	Y	N	N
Group 7	Y	Y	Y	Y	Y	N	N	Y	Y	N	N
Group 8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Group 9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

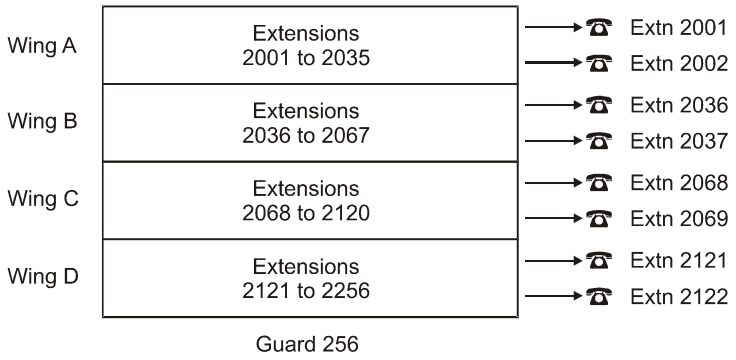
Refer programming section of the manual for above programming.

If any extension is barred from extension to extension dialing, then that extension shall not be able to dial any digit from 1~8. He can only dial ‘ 9 ’. You can set ‘ 9 ’ as security extension (from flexible programming). In this case, this extension shall only be able to call security by ‘ 9 ’ and shall not be able to call any other extension.

18. EXTENSION GROUPING

In an housing society if the complex is divided into separate wings then accordingly you can divide the extensions into groups (maximum 16) . Following features can be availed individually by each extension group

A) Security extension group - Each extension group can have its own security extension's (though the access code shall be same) . For example if we assume an society with following lay out (with security access code as 9)



Now when extn 2012 shall dial 9 extn 2001\2002 shall ring
when extn 2045 shall dial 9 extn 2036\2037 shall ring
when extn 2088 shall dial 9 extn 2068\2069 shall ring and so on

B) FND Display - upto 16 FND Displays can be connected (one for each group) , which shall function independently to show calling extension number of that group only. However in case of panic by an extn. in any group , all FND's shall indicate simultaneously.

C) Watch Dog For Watchman - Each security shall have its own independent watch dog timings

D) Visitors Double Check - Each security extension can set for visitors double check for his group of extensions.

E) Last Five Called Numbers - Last five called numbers of an extension can be viewed on the FND of that particular group.

F) Vendor Arrival - When any vendor arrives and the security dials the code for the particular vendor , then only those extensions which are in the wing of this security and have set a request for the above vendor shall ring.

(Chairman's broadcast shall be common for all extension's regardless of extension grouping)

19. WATCH DOG FOR WATCH MAN :

Crystal Guard intercom system can be utilized to keep a watch on your watchman too! You can program a set of 10 timings for a day (for setting of timings refer to programming section of the manual). During the programmed timings, the first extension of the security group shall ring. If the ring is not acknowledged by going off - hook, then the extension shall ring again after 1 min. If it still goes unacknowledged, (ie. the watch man was asleep or missing) then the missed time / date shall be recorded. A full record of all missed timings for the complete 31 days of the month shall be kept in record.

You can view the missed record on the FND display.

For this, from user password (from security extn. only)

☞ **Dial 22 + DD**
Where DD = Date (01 to 31)

The missed records shall be displayed as " **S HH MM** "

Starting from the first of every month, the new record shall automatically over write the old record of that same date.

20. VISITORS DOUBLE CHECK:

With this feature the security guard can keep a double check on any visitor visiting a flat owner. While conversation with a desired flat / extension is going on, security (By default extn 2001) shall dial

☞ **H/F + Dial *6**

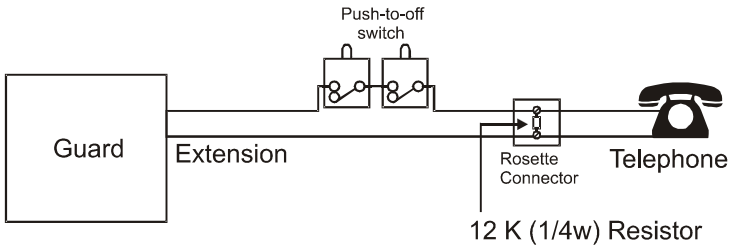
Now, after 4 min (Programmable) extensions of security and the flat shall ring simultaneously. When the flat responds the security can confirm whether the visitor has reached the flat and is a genuine person only.

21. PANIC ALARM / CABLE CUT ALARM:

Crystal Guard system has a unique cable-cut / panic alarm feature which can be utilized as an effective burglar alarm system.
To utilize the panic alarm feature, any number of push-to-off switches can be installed in any flat (say one in kitchen, one near the entry door, one in the bedroom etc.).Whenever any switch is pressed, it shall trigger the panic alarm and the pre-programmed extension at the security (Max. 4) shall start ringing. Simultaneously the extension number (which has triggered the panic) shall be flashed on the FND Display Panel.
The ringing / flashing on display shall continue until and unless the alarm is reset as follows:
Dial (From security extension)

☞ *10 + Extension Number

To set Panic ring extensions and to enable / disable the extensions for this feature refer programming section of this manual.
Similarly, when there is wire cut of any enabled extension, then programmed extensions will ring and the extension number shall be displayed on the display panel. Connection layout for above panic shall be as follows



(Note : 12K resistor at the telephone end is necessary for proper operation of this feature)

To **Reset** ring,
Dial (From security extension),

☞ * **10 + Extension Number**

Note:
In default, all extensions are disabled for this feature.

22. PANIC- BY- CODE:

One can also initiate panic by dialing ' # 100 '.
To reset panic, dial from security extension,

☞ * **10 + Extension Number**

Note: Do not enable for panic extension feature from main password, if you want panic only by code and not by panic switch / cable cut.

23. EMERGENCY REPORTING:

In case, there is an emergency situation in any flat, the flat owner can either use the panic feature or invoke emergency reporting.

For this,

☞ **Dial # #**

Each extn. can set for any 4 extension's of his choice to ring during emergency condition
To set, dial (from dial tone mode)

☞ *** 115 + Extn. No. + Extn. No. + Extn. No. + Extn. No.**

Now whenever this extension shall dial # #, above set extension's shall ring simultaneously. Any ringing extension going off hook shall be connected to the originating extension. If a voice module is connected in the system, you may feed in a voice prompt as-"Please Help" etc. When any extension shall dial # # and disconnect, programmed four extensions shall keep on ringing. Any extension going off hook shall get this voice prompt (along with CLI number display, if he has CLIP phone).

24. FND DISPLAY:

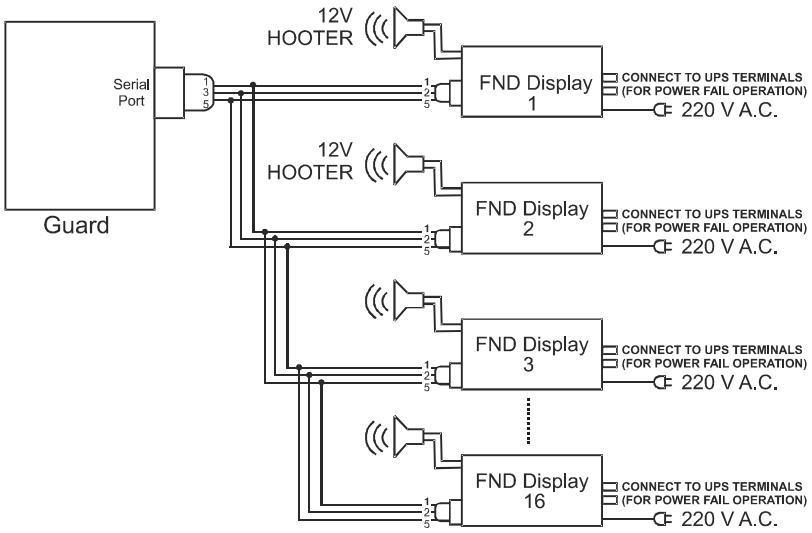
A 9 pin serial port is provided on the Guard system to which you can connect a multi colour FND display panel. In a big complex with seperate wings / security guard room, an individual FND display (Max. 16) can be provided for each security guard.

Suppose there are four wings - Wing A, Wing B, Wing C, Wing D in a big residential complex.

1. First divide the extensions into four groups as per the flat owners in each wing
2. Programme seperate Security Extension's / Panic Extension's for each wing .
3. Set the Jumper in the FND display for four buildings as shown below:

Switch 1	Switch 2	Switch 3	Switch 4	Extn Group No.
OFF	OFF	OFF	OFF	1
ON	OFF	OFF	OFF	2
OFF	ON	OFF	OFF	3
ON	ON	OFF	OFF	4
OFF	OFF	ON	OFF	5
ON	OFF	ON	OFF	6
OFF	ON	ON	OFF	7
ON	ON	ON	OFF	8
OFF	OFF	OFF	ON	9
ON	OFF	OFF	ON	10
OFF	ON	OFF	ON	11
ON	ON	OFF	ON	12
OFF	OFF	ON	ON	13
ON	OFF	ON	ON	14
OFF	ON	ON	ON	15
ON	ON	ON	ON	16

Connection of the display shall be as follows



Following information shall be available on this panel

a) Time Display
In idle condition current time is continuously displayed in Yellow colour. This time can be set for 12/24 hour format display

b) Calling extension Number display
When any extension calls security Number the called extension number shall be displayed in Green colour with a short buzzer sound to attract the security.

c) Panic display
When Panic is initiated by any extension, Panic Extension number shall be displayed in Red colour with continous buzzer sound until panic is resetted.

d) Last five called Number and Time Display:
Last five-called Number's with Time for any extn. can be viewed on the FND Display

e) Watch Man Missed Time Display
You can also view watchman-missed timings on this FND

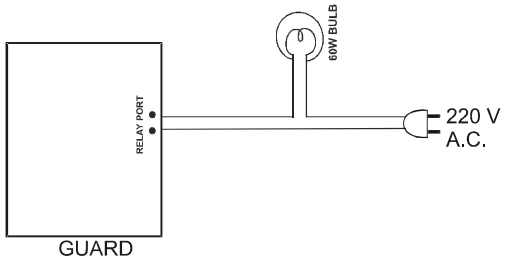
f) Display of flexible number setting
If you desire to view the flexible number of any port, dial (from user password)
☞ **715 + port no**

g) To view port number
To view the port number of any flexible extn, dial (from user password)
☞ **716 + port no**

This display panel is also provided with a relay port to connect any hooter or siren, which shall be activated during panic condition.

25. RELAY PORT:

A relay port is provided in the Crystal Guard system, which can be programmed to switch ON / OFF any electrical appliance. If the appliance consumes less than 0.5 Amp of current (or 100 watt power), you can drive it directly, and if it consumes more, you can drive it through an external relay / contractor.



To switch **ON** relay,

☞ **Dial * 165**

And To switch **OFF**,

☞ **Dial * 166**

further the relay port can be programmed to switch ON/OFF automatically at pre-programmed timings. Up to 10 sets of timing's can be set for the relay to switch ON/OFF. To set for auto mode, refer to programmer's section

26. PAGING:

A paging port is provided in the Crystal Guard system to which you can connect a speaker for making announcements.

To announce through this port,

☞ **Dial * 39**

You shall get music for 2-3 seconds and this music shall also be heard on the paging speakers so as to indicate that an announcement is going to be made.

Now, you can make your announcement.

27. LAST FIVE CALLED NUMBER AND TIME DISPLAY:

With the Crystal Guard system you can easily trace out for ghost \ malicious calls. There is a buffer to store last five called number and time sequentially for each extension. Once the buffer is full (i.e., after five calls) the new call shall overwrite the first call.

Now if any extn. receives a malicious call, the caller can immediately be traced out . For this,

☞ **Dial *712+ Extension Number**

Now you can view the last five called number and time on your FND Display, which is set for your Extension Group number.

Only operator extension is allowed to dial this code.

28 AUTO REDIAL OF LAST 5 CALLED NUMBERS

If someone had tried to call your extension during your absence, you may call him back automatically. To do so dial

☞ *** 717 X**

Where X = 1for last call (be it missed or matured)
2 for 2nd last call & so on.

29. TIMERS:

Timers are used to set timings for Dial tone, Ring tone, Double Check etc., Timer is common for all extensions.

Types of Timers:

29.1. Dial Tone Present Timer :

Defines how long dial tone\ busy tone should continue after lifting the handset

Default value:	007sec
Programmable value:	001sec to 030sec

29.2. Ring Timer:

It is the time for which an extension shall keep on ringing for any internal call.

Default value: 045sec
Programmable value: 001sec to 255sec

29.3.Vendor Arrival Ring Timer:

It is the time for which a vendor arrival requested Extension shall keep on ringing when the Desired vendor arrives at the security

Default value: 009sec
Programmable value: 001sec to 030sec

29.4. Watch Dog Ring Timer:

It is the time for which the watchman extension shall ring when watchdog feature has been enabled.
Default value: 020sec
Programmable value: 001sec to 255sec

29.5. Double Check Timer:

When the security sets for double check feature, both extension and security shall ring after a preprogrammed time. This time can be programmed as per ones requirement.

Default value: 005Min
Programmable value: 001min to 008 min

29.6. Watch Dog Time Interval between Two Rings Timer:

It is the time interval between two checking rings in watchdog timer feature.

Default value: 003Min
Programmable value: 003Min to 008Min

29.7 Auto Call Disconnector Timer:

It defines the time for which an Extension can talk with an external caller. When the time matures the Junction shall be released.

Default value: 005Min
Programmable value: 001Min to 020Min

Refer to the programming section of the manual for the programming of the above Timers.

30. VOICE:

Crystal Guard security intercom system can be programmed to record 8 different messages/ vendor messages PLUS one Chairman's broadcast message. The nine division's of voice module are as follows.

0 to 5 for vendor message
6 for wake up alarm
7 for emergency reporting by # # / # 100
8 for chairman message

(Note: You shall require an optional Voice\Vendor card to avail this feature).

30.1.To Record a Message:

Dial users password (By default - *891111)

- **Dial 23+X**
  Where x = 0 to 7

You can program

- 231 for First Vendor Message
- 232 for Second Vendor Message and so on
- 236 for Wakeup Alarm Message
- 237 for Emergency Reporting Message

For Chairman's Message

- **Dial 23+8**

Recording Time for Vendor Message = 11Secs
Recording Time for Chairman
Broadcasting Message = 16Secs

When the recording time for a Vendor/Chairman message matures you will get a confirmation tone.
Alternately if you want to record a shorter message, go on hook after your message is complete.

30.2. To PlayBack a Message:

Dial users password *891111

- **Dial 24+X**
  Where x = 0 to 8

At the end of Playback you will get a Confirmation Tone

30.3. Vendor Arrival:

1. Record separate messages (maximum eight) for each occasion
   Example: Message 0 = Milk Man has arrived
   Message 1 = Plumber has arrived
   Message 2 = Electrician has arrived
   Message 3 = Fruit seller has arrived

2. Circulate this message number list to all flats.

3. When an Extension requires a particular vendor he shall set a request on his extension as follows
   - ☞ **Dial *5 X 1**
     Where X=Message Number 0~5

     For Example: If an extension requires Milkman he shall dial - *501
     If he requires fruit seller he shall dial - *531

     An extension can set request for any number of vendor messages.

     To cancel the request for vendor arrival
   - ☞ **Dial *5X2**
     Where X=Message Number 0~5

     Now when an vendor arrives the security shall dial
   - ☞ ***4X**
     Where X=Message number

Example:
When the milkman arrives, security shall dial *40. As soon as he dials the code, all extension's who had set request for milkman and who are in the same Extension Group Number as that of the security, shall get a short ring sequentially one after the other. On lifting the phone, the extension shall receive milkman's arrival message.
You can also enable all extension's for a particular vendor message by a single command.To enable, dial from user password

☞ **5 X 1**
Where X=Message number

And to disable, dial

☞ **5 X 2**
Where X=Message number

30.4. Announcement of Chairmans Message:

This feature comes in useful when any common message is to be conveyed to a number of extensions, say - there is a meeting at. , or that your rent is due etc. Now whenever an extension (which has been set to receive this message) goes off hook, he shall hear the message.
To set the Extension's to whom you want to convey Chairman's message.

Dial (From User Password *891111)

☞ **25 + Extn No1 + Extn No.2 +….+ Extn No.n (go on hook)**

To set for all Extension's

☞ **Dial 25 + ***

To clear an extension from above list

Dial (from User Password)

☞ **26 + Extn No1 + Extn No.2 + ……..+ Extn No.n (go on hook)**

The programmed extension will be disabled to receive chairman's message

To clear for all Extension dial

Dial User Password

☞ **Dial 26 + ***

To Play the Chairman's Message

Dial users password *891111

☞ **Dial 27+1**

To stop playing chairman's message dial

Dial users password *891111

☞ **Dial 27+2**

30.5. Setting of Voice prompt on Emergency reporting:

To set for this voice prompt dial (from main password)

☞ **813 1 (for voice prompt)**

☞ **813 2 (to cancel voice prompt)**

30.6. Setting of Voice prompt on Wakeup alarm

To set for this voice prompt dial (from main password)

- ☞ **812 1 (for voice prompt)**
- ☞ **812 2 (for music)**

31. DISPLAY / PRINTER MODE:

In Crystal Guard system you can program the serial port for either Printer or FND Display.

Dial users password *891111

- ☞ **Dial 713 + 1**

To set the serial port for printer function

Dial users password *891111

- ☞ **Dial 713 + 2**

32. PRINTER:

Crystal Guard System has a buffer memory for storage of 1000 calls. When the buffer is full, the new call shall overwrite the 1st call. To get printout, connect any serial printer (with Baud Rate set at 2400) to the serial port of the EPABX. Alternatively you can also view the calls on your PC using PROCOM software.

Following information is given in each printout.

A. Originating/Terminating Extension Number
B. Time of the call
C. Date/Month/Year of the call
D. Duration of the call

VARIOUS TYPES OF PRINTOUTS:

You can have a printout of stored calls in various formats. For any printout, first enter the User Password mode.

32.1.Printout of all Calls:

☞ **Dial 7110 + 1**

On dialing this you will get print out of all calls

32.2.Printout of Last (01~99) Calls:

☞ **Dial 7111 + XX**

Where XX = 01 to 99 calls

For Example:

☞ **Dial 7111 + 20**

On dialing this you will get print out of last 20 calls

32.3.Print out of Calls Originating Extension wise:

☞ **Dial 7112 + Extension Number**

For Example:

☞ **Dial 7112 + 2002**

You shall get a printout of al calls made by extn. 2002

32.4.Printout of Calls Terminating Extension Wise:

☞ **Dial 7113 + Extension Number**

32.5.Printout of All Calls Made on a Particular Date:

☞ **Dial 7114 + DD+MM+YY**

Where DD = Date
MM = Month
YY = Year

For Example:

☞ **Dial 7113 + 23+04+03**

On dialing this you will get print out of all calls made on that date, month, year

32.6.To Clear Printer Buffer:

To clear the entire Printer Buffer memory

☞ **Dial 710 + Main Password**

33. CONNECTING EXTERNAL CO LINES:

In Crystal Guard System you can connect upto four external CO lines to receive calls from outside, by using the Junction card. With this card first four extensions are converted to CO ports. Only operator extension is allowed to access these CO ports. On dialing this CO access number he shall be connected to the external caller . Now he can transfer the call to any extension by using flash.

☞ **H\F Dial Extension Number**

When the extn answers , annonce the call and hang up . The call is transferred .

Alternately after dialing the extn. number simply go on hook . The transferred call shall keep on ringing on this extn . When the extn goes off-hook, he shall be connected to the external caller . If the transferred extension does not respond till 30 secs the call shall go back to the security extension.

If on transferring a call , the extn goes no-reply or is busy , then simply hook-flash again. You shall get transfer beeps again wherein you can transfer it to some other extn. Alternately if you h\f one more time you shall be connected back to the external call

33.1.Auto Call Disconnetor:

Auto Call Disconnnector feature is available only if your system is provided with Junction card. When this feature is activated for any extension, that extn. shall be able to speak with a external caller for a preprogrammed time only . Once this time is over , the jn shall be released

Refer programmer Manual to Enable/Disable auto call disconnector feature for a extension.

33.2. Conference With Junction:

If required, you can hold a conference even with the External caller and six internal extensions. Only operator extension is allowed to initiate conference.

Once the operator extension receives external call he shall H/F and dial required extension number . Once the extension answers, announce conference and H/F and dial 2nd extension number. Go on adding required extensions by H/F and dialing the desired extension numbers.(While adding more extensions for conferencing, the already added extensions continue to get music till the conferencing feature has been activated.)

When all the desired extensions have been added

☞ **H/F & Dial *0**

On dialing this, all the extensions on hold shall come in conference with the external caller.
When the operator extension leaves his handset all extensions in conference shall get error tone and the junction will be cleared.

34. SECURITY EXTENSION:

In Crystal Guard System you can set any four extensions as security extensions. (Refer to programmer manual for setting of the same). Only these security extensions are allowed to use security features, which are

1. Double Check
2. Reset of panic condition of any extension.
3. Missed Watchdog Time Display

Further you can set a common access code (it can be of 1 digit or up to 4 digits) for all four-security extensions. On dialing this code you shall be connected in rotational manner to any one of the free security extension having same extension group number as calling extension. When security code is dialed by any extension, first time security extension 1 shall get a ring. When the code is dialed again by any extension security extension 2 will get a ring even though security extension 1 is free. In this way all the security extension will get a ring in rotational manner whenever security code is dialed. In case if any security extension is busy, next security extension will get a ring. If all the security extensions are busy you shall get a busy tone. (Refer programmer manual to set this common code.)

Further if multiple extnesion's are set for security it can also be so programmed that all security extension's shall ring simultaneously. Any extension going off hook shall be connected to the calling extension.

PROGRAMMING SECTION

1. INTRODUCTION:

To prevent unauthorized users from reprogramming the system, a four-digit password has been set in the system which your dealer will disclose to you. This password should be kept confidential to prevent misuse of the system.

To reprogram any facility,

- ☞ **Dial Main password - * 89 00 00 (ie.. Star 89 00 00 from tone instrument)**

You shall get acceptance beeps.
Now, you can program in required facilities .If you make any mistake while programming, simply disconnect and start again (you need not dial the password again).
Once your programming is complete,

- ☞ **Dial 0**

to come out of programming mode.

2. CHANGING PASSWORD:

2.1 Programmers:

To Set New Main Password,

Dial Main password - *** 89 00 00** (ie.. Star 89 00 00 from tone instrument)

- ☞ **Dial 891 XXXX**

  Where XXXX = Any four digit code.

The New Main Password is now * 89 XXXX.

2.2 Users:

To Set New Users Password,

Dial Main password - *** 89 00 00** (ie.. Star 89 00 00 from tone instrument)

☞ **Dial 892 XXXX**

Where XXXX = any four digit code.

The New User Password is now * 89 XXXX.

Note:

1. The Default Main Password is 0000, while the Default User Password is 1111.
2. Dial ‘ 0 ‘ when all the programming is complete to come out of programming mode.
3. All programming is to be done in tone mode only.

3. CLEARING ENTIRE MEMORY:

To clear the entire memory & load the system with default settings,

Dial Main Password * 89 00 00 (ie.. Star 89 00 00 from tone instrument only)

☞ **96 + Main Password.**

The system shall restart again.

Note:
With this programming, the flexible numbers will not be washed off**.**
Flexible numbering table shall have to be set separately as follows,

Dial Main password

☞ **282 + ABCD - DCBA**

Where ABCD = Main password
DCBA = Password in reverse order

In case one forgets the Main Password, then proceed as follows:
Switch OFF the system.
Insert jumper cap on the two pin jumper near
IC 74 HC 245.
Switch on the system.
Wait for 10 Sec.
Switch off the system.
Remove the jumper cap.
Switch ON the system again.
Note:
After this operation, the password shall revert back to original * 890000.

4. SETTING DATE/TIME:

To set Time / Date,
Dial from Main Password,

☞ **82 + DD - MM - YY - DAY - HR - MN**

Where DD = Date
MM = Month
YY = Year
DAY = 1 - for Sunday, 2 - for Monday ….
HRMN = Time in 24 hour format

5. FEATURE GROUP:

Following features are available in Crystal Guard EPAX system:

Feature Name	Feature Number
Internal dialing	00
Auto call back	01
Call pick up	02
Call forward / Do not disturb	03
Hotline	04
Paging	05
Relay port access	06
Conferencing	07
Alarms	08
Barge - in	09
Monitor	10

Following 10 combinations of features are possible:

Feature No.	00	01	02	03	04	05	06	07	08	09	10
Group 0	N	N	N	N	N	N	N	N	N	N	N
Group 1	Y	N	N	N	N	N	N	N	N	N	N
Group 2	Y	Y	N	N	N	N	N	N	N	N	N
Group 3	Y	Y	Y	N	Y	N	N	N	Y	N	N
Group 4	Y	Y	Y	Y	Y	N	Y	N	Y	N	N
Group 5	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N
Group 6	Y	Y	Y	Y	Y	N	N	N	Y	N	N
Group 7	Y	Y	Y	Y	Y	N	N	Y	Y	N	N
Group 8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Group 9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

To allot a particular group to any extension,

Dial

☞ **31 + Extension Number + Group Number**

To allot a particular group to all extensions,

☞ **31 - * - Group Number**

6. CALL PICKUP GROUP:

To make a call pickup group, dial

☞ **301 + Extension No + Group No (1to 9)**

You can set any number of extension's in one group

7. SETTING PANIC RING EXTENSION:

In case of panic from any extension upto four extensions can be programmed to ring simultaneously.
If extensions are divided into groups , then these panic extensions can be different for each group

A) To Set **Panic Ring** extension's

Dial

☞ **114 + Extn. Group Number + Extn 1 + Extn 2 + Extn 3 + Extn 4**

Where Extn 1 to Extn 4 = Any four-extension numbers.
Extn. Group Number = Group 01~15

If only one or two extension numbers are required, then repeat that extension number.

In default Panic Extension Number shall be 2001

B) To **Enable / Disable** any extension for panic feature,
Dial
☞ **10 + Extn. No. + X**
Where X = 1 - To Enable feature.
X = 2 - To Disable feature.

8. FLEXIBLE NUMBERING:

A) To change any extension number,
Dial
☞ **37 + XXX + YYYY**
Where XXX = Port Number
001 for 2001
256 for 2256.
YYYY = Any four digit number.

If the new number is of 1,2 or 3 digits only, dial #

For Example: To set extension 2010 as 45,
☞ Dial 37+ 010 + 45 #

B) To **Wash** all default extension numbers,
Dial Main password

☞ **283 + ABCD - DCBA**
Where ABCD = Main password
DCBA = Password in reverse order

C) To set all extensions numbers **Back to Default** numbering from 2001,
Dial Main password

☞ **282 + ABCD - DCBA**

Where ABCD=Main password
DCBA=Password in reverse order

9. SECURITY EXTENSION :

Certain features (such as reset of panic) can be availed only by the security extensions. Up to four extensions can be set as a security extension for each group.

To program,

☞ **Dial 111 + Extn. Group Number + Extn1- Extn 2- Extn 3- Extn 4**

Where Extn 1 to Extn 4 = any four extn. numbers.
Extn. Group Number = Group 01~15

Note : 1) If only one or two extension numbers are required, then repeat that extension number.
2) In default security Extension Number shall be 2001
3) All 4 extenstion's should be in the same group
4) Prior to this programming divide the extension's in groups (Refer programming point no. 15)

10. SIMULTANEOUS RING ON SECURITY EXTN:

Dial

☞ **718 1 (for Simultaneous ring)**
718 2 (for normal ring)

11. SECURITY ACCESS CODE:

You can set a common security access code

☞ **37 049 YYYY (for G 16 / 32 / 48)**
☞ **37 257 YYYY (for G 128 / 256)**
☞ **37 513 YYYY (for G 512)**
Where YYYY = Any four digit number

If the Security code is to be of 1,2 or 3 digits only,

☞ **Dial #**

For Example: To set security access code as 9,

☞ **Dial 37+ 257 + 9 #**

12. 12/24 HOUR FORMAT TIME DISPLAY FOR FND:

Dial

☞ **811 1 (for 12 hour format display)**
811 2 (for 24 hour format display)

13. AUTO RELAY ON/OFF

Up to 10 sets of timings can be programmed for the relay to switch on/off automatically. To set,
Dial (from main password)

☞ **851 HR MM SS (ON) HR MM SS (OFF)**

For example : To set ON/OFF timings as follows

	ON	OFF
	8.00 AM	8.40 AM
	10.00 AM	1.00 PM
	3.00 PM	3.30 PM
Dial	851 080000	084000
	851 100000	130000
	851 150000	153000

For programming a new set of timing you shall have to erase the old table. To do dial

☞ **852 1**

Now to set for the auto mode dial

☞ **854 3**

14. SETTING OF WATCH DOG FOR WATCH MAN RING TIMING :

One can program a set of 10 timings for the security extension to ring at that timing. If there are more than one extension groups , then the security extn of each group can be programmed for separate independent timings

To program,

☞ Dial 20 +Extension Group Number+ HH MM + HH MM + ……+ HH MM (10 Times)

Where HH MM = Time in hour / min in 24 hour format.

Group Number = 01~15

If you want to set say 4 ~ 5 timings, then you can repeat the last time any number of times to fill the table.

Example: To set timings as 6.30 pm / 8.00 pm / 9.45pm/ 11.50 pm / 3.00 am / 4.00 am / 7.00 am, for group 1

☞ **Dial 20 +01+ 1830 - 2000 - 2145 - 2350 - 0300 - 0400 - 0700 - 0700 - 0700 - 0700**

Note: To cater for the day change over period you cannot set 23:55 to 23:59.

If anytime you want to disable the feature then,

☞ **Dial 212**

To enable again,

☞ **Dial 211**

15.TIMERS:

To set value for a particular timer

Dial main password

☞ **217 + Timer Number + XXX**

Where XXX = value in Sec/Min for that timer

Example: To set time for Dial tone Timer

☞ **217 + 00+030**

Timer Name	Timer Number
Dial Tone Timer	00
Ring Timer	01
Voice Ring Timer	02
Watch Dog Ring Timer	03
Double Check Timer	04
Watch Dog Time Interval between two Rings Timer	05
Auto Call Disconnector Timer	06

16. AUTO CALL DISCONNECTOR:

This feature is available only if your Guard system is provided with a Junction card. To Enable the Extension for Auto call disconnector feature.

☞ **Dial 714 + Extension Number + 1**

To Disable Auto call disconnector feature for a particular Extension

☞ **Dial 714 + Extension Number+ 2**

17. FLASH TIMING:

You can set your extension flash timing by dialing

☞ **Dial 36 + Extension Number + X**
Where X = 2 ~ 9

For Example: To set Flash timing of 400 ms for extension 2001

+ Dial 36+ 2001 + 4

To set a common flash timing for all Extension

☞ **Dial 36 + * X**
Where X = 2 ~ 9

In default flash timing for all extension is 200 ms

18. EXTENSION GROUPING:

You can divide the extensions in groups (max sixteen).For this

☞ **Dial 113+ Extension Group Number + XXX**
Where XXX = Port Number
(001~256)
Extn. Group Number = 01~15

All extension's from this port number to the the last port will be set in this Extension Group.

Example: To set extns 2001 to 2024 in group 1
2025 to 2110 in group 2
2111 to 2166 in group 3
2167 to 2256 in group 4

☞ **Dial 113 01 001 (to set 2001 to 2256 in group 1)**
113 02 025 (to set 2025 to 2256 in group 2 - now only 2001 to 2024 are left in group 1)
113 03 111 (to set 2111 to 2256 in group 3 - now only 2025 to 2110 are left in group 2)
113 04 167 (to set 2167 to 2256 in group 4 - now only 2111 to 2166 are left in group 3)

To Program a Particular extension in a particular Extension Group number

☞ **Dial 112+ Extension Group Number + Extension number**

Where Extension Group Number =01~15

Example: To set 2002 in Extension Group number 2

☞ **113+02+2002**